DOCUMENT RESUME

ED 159 165 SP 013 059

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TITLE Applying Competency-Based Education in Preparing Teachers: The Case of the Free University of Iran.
PUB DATE 78
NOTE 14p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Change Strategies; *Curriculum Development; *Developing Nations; Educaticnal Improvement; *Foreign Countries; *Manpower Utilization; *Performance Based Teacher Education; Social Factors; Teaching Skills
IDENTIFIERS *Free University of Iran

ABSTRACT

The Free University of Iran was established for the purpose of expanding higher educational opportunity in all areas of the country and training semiprofessional and professional manpower in Iran, particularly in less developed rural areas. The University initially is concentrating its training in the areas of teacher education, health services, and rural development. In designing and implementing all educational programs the principles of competency-based education are being applied. The most pressing need has been determined to be competent secondary school teachers of science and mathematics. To train teachers to meet this need, a priority listing of goals was specified using three basic criteria: relative importance and influence with respect to continued development of Iranian society; relative feasibility when considering the conditions necessary to implement each goal; and relative time required for prospective teachers to demonstrate adequately the necessary competencies. The required skills for teachers are delineated within the framework of these goals. Components of the four-year training program are outlined in this paper. (JD)

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SEP 18 1978

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APPLYING COMPETENCY-BASED EDUCATION IN PREPARING TEACHERS - THE CASE OF THE FREE UNIVERSITY OF IRAN

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Developing educational programs should be based on specific needs and employ systemic processes. All too often this does not occur, either because of a lack of resources or time, or because of demands imposed by an ongoing program. The experiences of the Free University of Iran suggest several innovative and useful approaches that could be incorporated in other settings and institutions.

In December, 1973, Iran faced a shortage of teachers, particularly teachers in the rural parts of the country. Further, students were educated primarily by lectures, even in primary grades. And last, those persons who were teaching were undereducated themselves, particularly with respect to teaching strategies. They taught as they were taught, with little improvement over the years.

The Free University of Iran was established as a response to these needs. Being a new institution, it was given wide latitude to design the most effective program that would meet the needs of a rapidly changing nation, yet one where rural areas are still underdeveloped.

The University was established by the Iranian Government for the purpose of: (1) expanding higher educational opportunity in all areas of the country; and (2) training semi-professional and professional manpower in Iran, particularly in less developed areas.

To meet the first purpose, the University was structured to deliver instruction to various regions of the country by establishing a series of local

SP013 059

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learning centers. Students are instructed in these centers mainly through self-instructional work-texts, home-experimental kits, and radio and television programs. The programs are broadcast by the National Iranian Radio and Television Network.

Local centers provide students with further support through their multi-media reference libraries, tutorial services for all courses, laboratories for more advanced courses, and testing centers where students are evaluated and given feedback on their progress in each course on a weekly or bi-weekly basis.

The achieve the second purpose, the University initially is concentrating its training efforts in three areas (1) teacher education, (2) health services, and (3) rural development. In these areas the University offers four-year programs leading to baccalaureate degrees, as well as non-degree adult courses.

In designing and implementing all educational programs, the University is attempting to apply the principles of the competency-based education as much as possible. The purpose of this article is to describe how the CBE approach was used in designing the framework of the Teacher Training Program in the Free University of Iran.

Status of Teacher Training in Iran

The Iranian national system of public education includes three phases: a five-year elementary education phase, a three-year intermediate (guidance) phase, and a four-year secondary phase providing academic or technical education.[1]

Teachers for elementary and intermediate schools prepared one to two years in teacher training institutions prior to teaching. These teacher

preparation institutions are responsible directly to the Ministry of Education. Secondary school teachers, however, receive four years of education in colleges and universities prior to teaching.

Due to the expansion of public education and a growing desire of parents to have their children educated, demand for teachers has been growing rapidly in recent years. According to the Ministry of Education, more than 40,000 new teachers were needed for the Academic Year 1977-78.[2] However, existing teacher training institutions are graduating only about 20,000 teachers per year.

Aside from the shortage problem, most teachers are not adequately prepared for teaching.[3] The majority of teachers still emphasize memorization of factual information rather than teaching for developing intellectual skills in students. Lecture and recitation are the predominant instructional strategies used in classrooms.

Teacher Training Program at FUI

Based on a preliminary study of teacher education in Iran, it was determined that the most pressing need is for competent secondary school teachers of science and mathematics. The FUI Teacher Training Program during the initial period is focusing primarily on three subject-matter specialties; mathematics-physics, physics-chemistry, and life-earth sciences. The four-year program has been designed, however, so that many of its professional components would be appropriate for preparing teachers in other subject matter areas, e.g., social sciences, as the program expands.

Throughout the planning effort, two guiding principles were considered. First, aims and objectives of the program were based on explicit assumptions regarding the Iranian culture, particularly the environment within which prospective teachers would work. Second, planning and development of the program was based on the principles of competency-based teacher education.

To select realistic goals for its Teacher Training Program, the Free University of Iran involved approximately sixty Iranian academicians, teacher educators, teachers, and educational administrators in a series of seminars and discussion sessions. As a result of this exploration, a priority listing of twelve goals were specified. The factors considered in rating each goal were: (a) relative importance and influence with respect to continued development of Iranian society; (b) relative feasibility when considering the conditions necessary to implement each goal; and (c) relative time required for prospective teachers to demonstrate adequately the necessary competencies.

The goals resulting from this exhaustive study are listed below in order of their relative priority for prospective teachers in the program.[4]

1. Developing skills in teaching content to students.
2. Developing skills in teaching intellectual and inquiry processes.
3. Developing survival skills when introducing new ideas and implementing new ways of teaching in schools.
4. Developing skills for study of own teaching behavior.
5. Developing skills in establishing a teaching environment, conducive to creativity and productive thinking.
6. Developing self-directed learning skills in pupils.
7. Developing skills to bring about constructive changes in school.
8. Developing skills for continuing as a student of their selected field of study.
9. Developing self-exploration skills and personal awareness in their pupils.
10. Developing skills for interacting with others.
11. Developing skills to bring about constructive changes in their community.
12. Developing skills in interpersonal behaviors of their pupils.

Once the general goals of the program were determined, specific competencies were derived. A detailed analysis of each competency was made to derive sub-competencies and subsequently, to plan the types of instruction needed for students to reach the objectives. Educators from several American universities assisted FUI planners in this process.

The instructional program was based on several assumptions.

1. Basic knowledge and skills of teaching would be emphasized.
2. Spiral development of topics would be employed.
3. Immediate practice of skills and use of newly learned knowledge would follow instruction.
4. Simple concepts would be introduced prior to more complex ramifications of a topic; a general treatment would precede more specific instruction.
5. Illustrations of instructional tactics and strategies would focus on mathematics and science, but instructional units would be designed so that other subjects could be added later.
6. Content of illustrations would be academically correct.
7. Instruction would be provided primarily through processes other than face-to-face instructor/student arrangements.
8. Tutors would be available in each local site to monitor the process and answer questions, but would not be able to deliver instruction.
9. A wide range of instructional modes would be included in the program to demonstrate alternative instructional processes.
10. Students would be involved in schools from the beginning of their programs; such involvement would increase as they progressed.

The four-year program leading to the baccalaureate degree is composed of 256 units. Each unit includes approximately fifteen hours of instruction. General studies comprises 40 units; subject-matter components 156 units, and professional components 60 units. Table 1 illustrates how these units are distributed in a general degree plan.

TABLE 1

DISTRIBUTION OF UNITS OF STUDY IN THE FUI
TEACHER TRAINING PROGRAM

YEAR	PROFESSIONAL COMPONENT (EDUCATIONAL STUDIES)	SUBJECT-MATTER COMPONENT	GENERAL EDUCATION COMPONENT
Year One	-	32	32
Year Two	16	40	8
Year Three	20	44	-
Year Four	24	40	-
Subtotal	60	156	40
Total = 256			

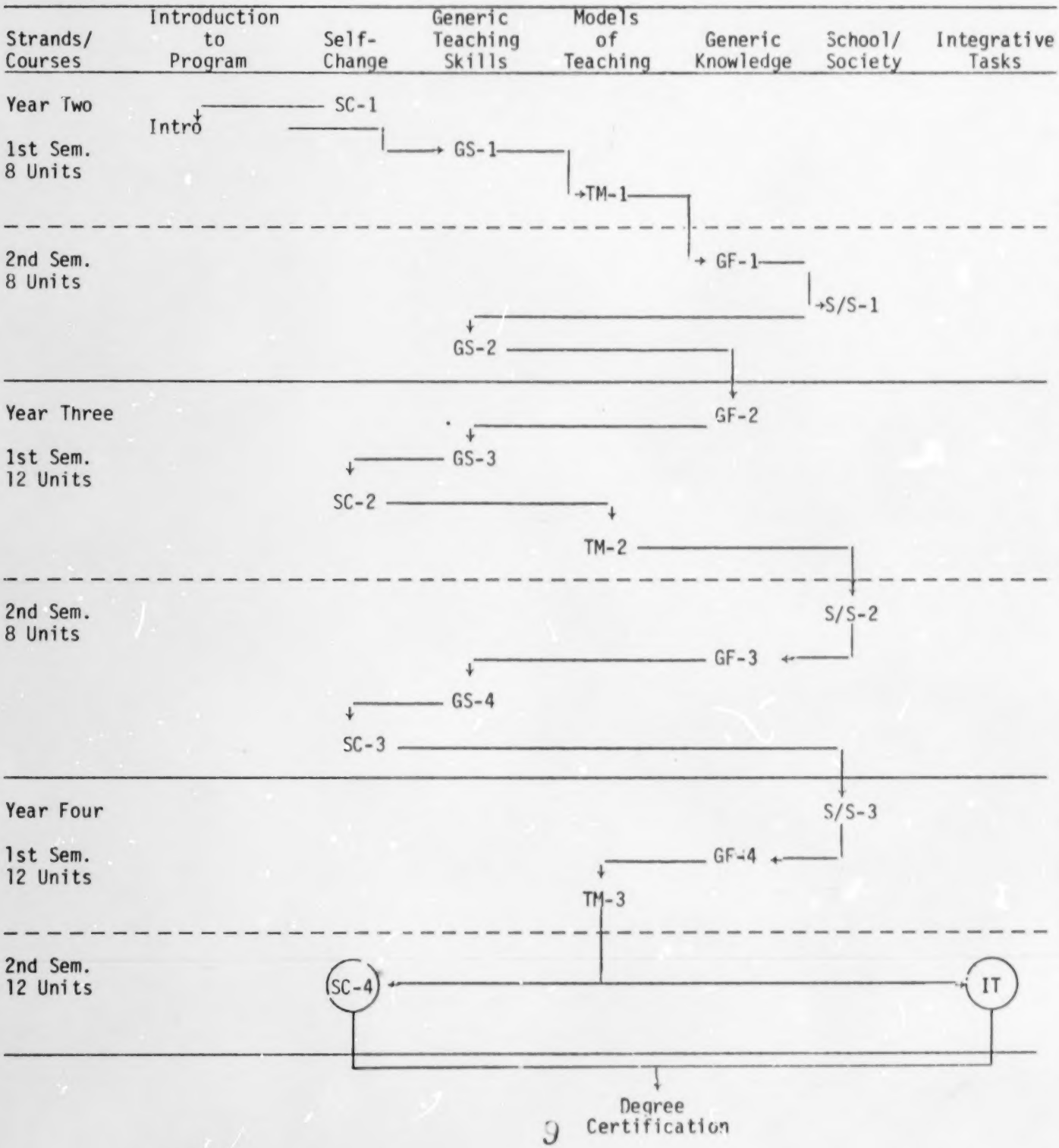
Professional Components of the Program

The 60 units in the educational studies component are included in the second, third, and fourth years of a student's program. In the second year, 16 of his 64 units of study are in educational studies; 20 of 64 in the third year; and 24 of 64 units in the fourth year devoted to this area.

Educational Studies is designed around seven strands. Introduction to Program and Integrative Tasks provides overview experiences at the beginning and summative evaluation processes at the end of the fourth year. The other five strands are tightly woven together to provide the major woof and warp of the program's fabric. These five are Self-change, Generic Teaching Skills, Models of Teaching, Generic Knowledge, and School and Society. Table 2 illustrates the interrelatedness of these strands.

TABLE 2

FUI - TTP PROFESSIONAL COMPONENT[5]



The Introduction provides an overview of the program, with students being made aware of the competencies required for graduation, modes of instruction in the program, outline of strands and their interrelations, and evaluation procedures. Student-centered teaching is compared with teacher-centered and discipline-centered teaching as students analyze several approaches and distinguish the student-centered philosophy upon which the FUI Program is based.

The first unit of Self-change precedes the introduction, and includes a battery of assessment instruments. The MTAI, Work Motivation Inventory, Concerns Inventory, demographic information, and other tests are administered and interpreted to students as part of a diagnostic/prescriptive process in the program. Prior to the second part of Self-change, students would have studied a variety of teaching practices and would have begun applying them in peer and pupil teaching settings. The second Self-change strand focuses on informal approaches to assessing instruction. Later, in Self-change-3, formal assessments (using Flanders, OSCAR, STARS, and other observation scales) are learned. The assumption is that persons who use informal and self-made instruments first are more likely to understand the interaction than if they simply completed formal instruments. Finally, in Self-change-4, prospective teachers apply their knowledge of self-assessment during student teaching as a way to imporve their own practice. As professionals, it is important for teachers to be able to evaluate their own performance, and to take corrective actions. This strand in the program is designed to provide them with the tools for this process.

The Generic Teaching Skills introduces pre-active, interactive, and post-active skills used by teachers. These include planning skills.

diagnostic skills, motivational skills, questioning tactics, stimulus variation skills, and cognitive closure skills. These are introduced throughout the program, initially in a general frame and later more specifically as they are related to other strands.

Three Models of Teaching are included in the program. The advance-organizer model is employed because it has been found to be effective in increasing cognitive processes, and Iranian education in high schools at this time is primarily content-oriented. The problem-solving model (drawn from the work of Suchman, Taba, and Schwab) is included to extend teachers' repertoire of strategies so they focus on solving problems as well as learning subject matter. The third model, individualized, draws its approach from diagnostic/prescriptive strategies, and supports not only the other two models, but provides a frame for the teacher education program itself. Students are asked first to analyze the three models, then use them in microteaching settings, then apply them directly to their major subject area, and finally use them appropriately during Integrative Tasks (student teaching).

Generic Knowledge provides basic concepts of educational theory and practice. In its historic roots, it explores education in Iran while philosophically relating education to Iranian and Western cultures. Psychological foundations, including theories of learning and adolescent psychology, provide the major portion of this strand.

School and Society considers the relation of a teacher and school to society. It provides information on future directions of education as Iran moves toward decentralized schools. It analyzes the teacher's role in a community and responsibility for improving the culture of the country.

Finally, Integrative Tasks includes a supervised teaching experience. While students would have already worked extensively in schools and with

small groups of pupils, this period provides an opportunity to integrate skills and knowledges and to demonstrate teaching competence while being summatively evaluated. At the conclusion of this phase of the program, students are graduated and certified as secondary school teachers.

These seven strands are interrelated in a systemic sense. Concepts and skills learned in one strand are used subsequently in others. For example, in Generic Teaching Skills-1, students learn the distinction between goals and objectives and how to write behavioral objectives. These are used in planning lessons and writing objectives suitable for various skills. Then, in Generic Knowledge-2, students learn about various types of objectives in the cognitive and affective domains which, in turn, lead to more precise definitions of objectives in relation to Generic Teaching Skills-2.

Likewise, they are expected to write a lesson plan (Generic Teaching Skills-1) and teach it to peers. Then the three models of teaching are introduced in Models of Teaching-1 to extend their perception of the range of strategies available to teachers. Following a series of components in Generic Knowledge and Generic Teaching Skills where explicit knowledge related to the models is learned and demonstrated as individual skills (questioning, for example), each of the three models is again explored (TM-2). Then, more specific applications of Generic Teaching Skills to subject-matter areas provides greater depth of treatment which, in turn, is applied to the three models as they are used in subject areas. This spiral approach is a basic organizer for the program.

In Conclusion

Course teams, composed of academicians, educational technologists, editors, and audio-visual specialists have translated objectives and unit

specifications into instructional units to be tested with potential teachers from rural areas of Iran. Many of the original sources and research were in English. These had to be translated into Farsi (Persian language). The concepts, too, had to be adapted to the culture of Iran.

The initial prototype test has been completed, with a resounding success. Students were able to learn through distant teaching processes. They were enthusiastic about the new and innovative kinds of instruction in which they were engaged. And, they recommended highly that the program be expanded.

What has not yet been tested is the impact of these new strategies on the educational process. Will teachers trained in these innovative procedures persist in their use of them with their students? Will the program impact the level and effectiveness of education in rural areas? And, will the program make any long-term impact on education in a country struggling for an improved life for all its citizens? These major questions are yet to be addressed. As the program matures, they should be the bulwark of the long-range assessment effort.

Notes

[1] World Survey of Education, V, UNESCO, Paris, 1971, p. 611.

[2] "Schools Need 200,000 Teachers," Kayhan No. 9689, October 18, 1975, p. 13 (in Farsi).

[3] "Methods of Instruction in Iranian Schools Must Change," Kayhan, No. 10064, January 12, 1977, p. 11 (in Farsi).

[4] The Planning Framework for the Teacher-Preparation Program, Volume I, (an institutional report), The Free University of Iran, Tehran, 1975, pp. 5-6.

[5] Adapted from Teacher Training Program - The Framework and Components, (an institutional report in Farsi), The Free University of Iran, Tehran, 1976, p. 15.

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